State of New Jersey

SOLID WASTE ADMINISTRATION

BEATRICE S. TYLUTKI

CERTIFICATE OF APPROVED REGISTRATION

Under the provisions of N.J.S.A. 13:lE n as the Solid Waste Management Act, this registration is

J. T. BAKER CHEMICAL COMPANY

Sanitary Landfill

26

44

Harmony Township

Warren

2110B

Department of Environmental Protection.

to fill or alter., or allow to be filled or altered, in any way, lands that are deemed to be Riparian, Wetlands, stream acquiring the necessary grants, permits or approvals from the Department of Environmental Protection.

August 17, 1978

Solid Waste Administra

This Certificate of Approved Registration and Engineering Design Approval is conditioned upon the compliance and implementation of the following:

1. Permitted Waste Types

Only those wastes generated by the J.T. Baker Chemical Company Phillipsburg Plant and of the following, types shall be accepted at this facility:

I.D.	WASTE	
77	Liquid Chemical Waste	(sludge from the waste water treatment Plant only)

2. Prohibited Waste Types

The following materials, liquid or solid, shall not be disposed of at this facility:

I.D.	WASTE
10	Municipal
12	Dry Sewage Sludge
13	Bulky Waste
17	Dry Hazardous Waste
18	Dry Non-Hazardous Chemical Waste
23	Vegetative Waste
25	Animal and Food Processing Wastes
26	Oil Spill Clean-Up Wastes
27	Non-Chemical Industrial Waste
28	Infectious Waste
70	Waste Oil & Sludges
72	Bulk Liquid & Semi-Liquids
73	Septic Tank Clean-Out Wastes
74	Liquid Sewage Sludge
76	Liquid Hazardous Waste
77	Liquid Chemical Waste (other than waste water treatment plant sludges)

3. Groundwater Monitoring

Groundwater from each of the three (3) existing "rock well" groundwater monitoring wells shown on drawing number 1 of the referenced engineering plans shall be sampled quarterly and analyzed by a New Jersey recognized laboratory. The monitoring shall be in accordance with N.J.A.C. 7:26-2.5.22 of the Rules of the Solid Waste Administration.

In addition, two (2) new wells shall be installed at this facility: one new "rock well", to be constructed to the same specifications as for the existing three wells, and one "sand well", to be constructed in

accordance with the attached specifications. These wells shall be installed within sixty (60) days from the date of this Certificate and shall be located as follows:

3. Groundwater Monitoring (continued)

Well #4: On the west side of River Road (opposite the landfill), opposite existing Well #1, and approximately thirty (30) feet back from River Road. This well shall be of the "rock well" type.

Well #5: Near (within 50 feet or less) Well #4, and also approximately thirty (30) feet west of River Road. This well shall be of the "sand well" type.

4. Operational Plan and Site Preparation

The operational plan and site preparation shall be in accordance with the referenced operating procedures manual and drawings numbered 1 and 2 of the referenced engineering plans. Ten (10) existing unlined pits, numbered 8 through 17 on said plans, shall be closed out and replaced by four (4) new double-lined pits, numbered 17 through 20 on said plans. Four (4) of the ten pits to be closed out shall have all the sludge previously disposed in them disinterred and transferred to one of the double-lined pits. The other six-(6) pits to be closed out shall be filled with clean soil to the surrounding grade and imperviously capped with clay.

The site preparation shall proceed in accordance with the equivalent time schedule as proposed in the referenced plan.

Construction of New Double-Lined Pits

The construction of two (2) of the four (4) new pits 17 through 20, each equipped with two (2) impervious bottom liners, a leachate collection pipe, a leak detection riser pipe and a concrete chute in each corner., and the construction of the leachate collection main and the leachate storage tank shall all be completed within six (6) months from the date of this Certificate. The other two (2) new pits, each equipped in an equivalent fashion, shall be completed within one (1) year from the date of this Certificate. All sludge disposal operation shall be transferred to these new pits immediately upon the completion of construction of the first two of these new pits.

Capping of Existing Unlined Pits

The six (6) presently open unlined pits numbered 9,. 10, 11, 12, 13, and 14 on the referenced engineering plans shall be filled with clean soil and graded so as to prevent the ponding of water, and shall be sealed with an impervious cap of a minimum of six (6) inches of compacted bentonite clay. The clay caps shall be underlain by a minimum of six (6) inches of compacted soil and overlain by a minimum of twelve (12) inches of loam. The loam shall be re-vegetated by sowing with grass seed during the spring and/or fall in accordance with the recommendations of the county agricultural agent.

5. Surface Water Control

The grade and thickness of final cover on all surfaces of finished and sealed pits shall be maintained regularly so as to prevent the occurrence of ponding of water. Any off site drainage shall be such as not to cause a silt problem.

6 Excavation

Site excavation shall be in accordance with drawing number 2 of the referenced engineering plans, with the maximum depths of excavations to elevation 248 feet in pit 17, 231 feet in pit 18,.233 feet in pit 19, and 231 feet in pit 20. The excavated pit bottoms shall be pitched towards the leachate collection and leak detection systems.

7. Impervious Bottom Liners

Two (2) impervious liners shall be installed on the bottoms and side slopes of each of the four-(4) new pits 17, 18, 19, and 20. These liners shall be installed in accordance with the details shown on drawings numbered 2 and 3 of the referenced engineering plans. These liners shall be installed under the supervision of an experienced plastic liner contracting firm and all seams and joints in each pit shall be field inspected and certified by the contractor prior to any sludge disposal in that pit.

8. Leachate Collection

The system to collect leachate from the bottoms of each of the four (4) new double-lined pits 17, 18, 19, and 20 and drainage to a storage tank shall be constructed in accordance with the details shown on drawings numbered 2 and 3 of the referenced engineering plans. The leachate storage tank shall be constructed in accordance with the details shown on drawings numbered 4 and 5 of the referenced engineering plans.

9. Leachate Disposal

Leachate collecting in the storage tank shall be pumped into tank trucks and transported to the J.T. Baker Chemical Company's wastewater treatment plant in Phillipsburg, as detailed on page 4 of the referenced operating procedures manual. In addition, the liquid level in the leachate tank shall be measured and recorded on each day of operation, and on a monthly basis after the facility terminates . Whenever the liquid level in the tank at the end of the operating day exceeds six thousand (6,000) gallons, then additional tank trucks shall be sent to the facility before the end of the next day to remove the excess leachate in the tank.

Leak Detection Monitoring

Each of the four-(4) leak detection riser pipes shall be examined monthly for the presence of liquid, and the levels of any liquids found shall be recorded. In the event that liquid is detected in any of these riser pipes, this Administration shall be notified of the discovery within thirty (30) days from the date of detection.

Correction of Leaks

The registrant shall, within thirty (30) days from the notification of such finding, submit for this

corrective options outlined on pages 5 and 6 on the referenced operating procedures manual. Such corrective action engineering design shall include complete details and time schedule for the corrective

Leachate Records

A graph of the amount of leachate versus time for the storage tank shall be maintained on a monthly

facility termination, the amount of leachate collected increases substantially, then the bentonite seal on the top of each pit shall be examined and all leaks shall be repaired within ninety (90) days of their initial

10. Dikes

impervious bottom liners. These dikes shall be constructed per the referenced engineering plans, and the top and outside dike surfaces shall be either seeded or riprapped, immediately following completion of

11. Fencing

referenced engineering plans and operating procedures manual. Installation of this fence shall be completed within six (6) months from the date of this Certificate.

Dust Control

Dust control shall be effected by the spraying of water or by the spreading
equivalent means as approved by this Administration.

13.

An adequate water supply and/or fire fighting equipment shall be readily available on site or on call to extinguish any and all fires. Fire fighting procedures shall be posted.

Maximum Elevations

The maximum elevations above sea level shall be 266 feet in pit 17, 260 feet in pit 18, 255 feet in pit 19,

of the referenced engineering plans.

15.

The final cover on each pit shall consist of a minimum of two (2) feet of compacted soils, including a lower layer of a minimum of six (6) inches of soil, an intermediate layer of a minimum of six (6) inches of

compacted to give a maximum permeability of 1 X 10^{-7} cm/sec. One boring shall be made on the clay layer installed on each pit to confirm that the required thickness has been met, and an undisturbed sample shall be taken from each pit for a permeability test by an independent soil laboratory. The thickness and permeability test results shall be submitted to this Administration. If the test results fail to meet the above-mentioned criteria, then corrective measures shall be taken immediately to achieve compliance with those standards. The boring holes shall be back-filled with compacted clay.

The top loam cover shall be graded so as to facilitate drainage therefrom, and shall be re-vegetated by sowing with grass seed during the spring and/or fall in accordance with U.S. Soil Conservation Service specifications or the recommendations of the county agricultural agent.

16. Final Closure

Final cover shall be applied, graded, and grass seeded on each of the four new pits within six (6) months after the filling of that pit to the approved final grade.

17. Plans in Office

One (1) complete set of the approved engineering plans, operating procedures manual, the records of leachate levels and analyses, and these conditions of registration shall be kept at the J.T. Baker Phillipsburg, New Jersey plant office and shall be available for inspection by Department personnel or its designated representative.

18 Certification of Construction

At the end of seven (7) months from the date of this Certificate, a letter shall prepared by the registrant and be submitted to this Administration to certify that the excavation sub-grade preparations, and installations of the 20 mil secondary liners, the 12 inch soil aggregate layers, the 30 mil primary liners, the 8 inch soil aggregate layers, the 6 inch coarse and fine aggregate layers, the leachate collection system, main drain lines and storage tank, and the leak detection collector and riser pipes for two (2) of the four (4) new pits 17, 18, 19, and 20 and the closing and bentonite sealing of existing pits 9, 10, 11, and 12 together with the boring log and permeability result of the bentonite clay layer have all been performed in accordance with the approved engineering design and/or the conditions of this Certificate. At the end of thirteen (13) months from the date of this Certificate a similar letter shall be submitted to this Administration by the registrant to certify that the construction of the other two (2).new pits has been performed in accordance with the approved engineering design and/or the Conditions of this Certificate.

At the end of nine (9) months from the date of this Certificate, a letter shall I prepared by the registrant and be submitted to this Administration to certify that the closing and bentonite sealing of existing pits 13 and 14 have been performed in accordance with the approved engineering design and/or the conditions of this Certificate.

In addition, at the end of seven (7) months after each termination of one of the new pits 17, 18, 19,.and 20, a letter shall be prepared by the registrant and be submitted to this Administration to certify that the closing and bentonite sealing of that pit has been performed in accordance with the approved engineering design and/or the conditions of this Certificate.

19. Duration of Registration

proper application at that time, provided that there is still design capacity remaining and that the operation will meet all other Solid Waste Administration requirements at that time.

Referenced Engineering Plans and Report

The construction and opera
7:26-1 et seq. and with the engineering plans and narrative prepared by Metcalf & Eddy, Inc., specifically: the plans prepared by Clifford W. Bowers, P.E., and revised on April 25, 1978, and the

drawing, numbered BY-35, prepared by Kenneth L. Mann, P.E. and dated November 14, 1977; and with these approval conditions. In case of conflict, the conditions of this Certificate shall supercede those of

Failure to ' comply with any or all limitations heretofore mentioned will result in the Department seeking relief under N.J.S.A. 13:lE-l et seq., the Solid Waste Management Act. Specifically, failure to so comply

-12.

This Certificate of Approved Registration and Engineering Design Approval is not valid until the original

Waste Administration for final processing.

Signed by Frances E. Steele

My Commission Expires Aug. 16, 1980

Aug. 15, 1978
Date

_____
Applicant Signature

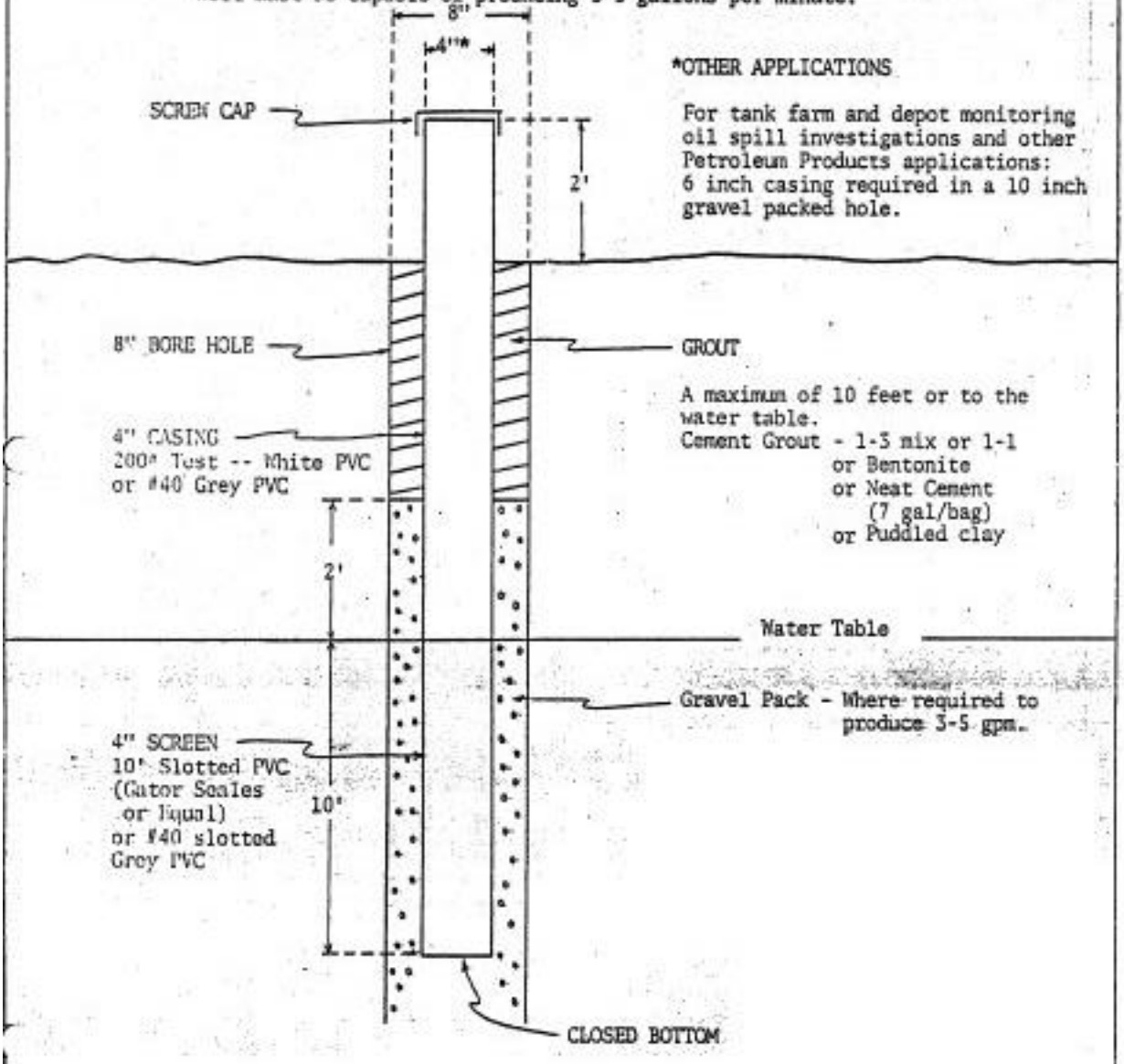
_____
Applicant's Name (Printed)

Manager, Environmental Protection

MONITORING WELL SPECIFICATION
WATER TABLE - SAND WELL

Please note: State Well Permits are required. Report "use of well" on well permit application as, "Sanitary Landfill Observation Well."

Also note: Extra care should be taken in making an accurate log of materials encountered in drilling and in reporting the stabilized static water level. Well must be capable of producing 3-5 gallons per minute.



*OTHER APPLICATIONS

For tank farm and depot monitoring oil spill investigations and other Petroleum Products applications: 6 inch casing required in a 10 inch gravel packed hole.

A maximum of 10 feet or to the water table.
Cement Grout - 1-3 mix or 1-1
or Bentonite
or Neat Cement
(7 gal/bag)
or Puddled clay

NOT TO SCALE